CFM-10/10L

SERVICE MANUAL

Ver. 1.1 2005.05

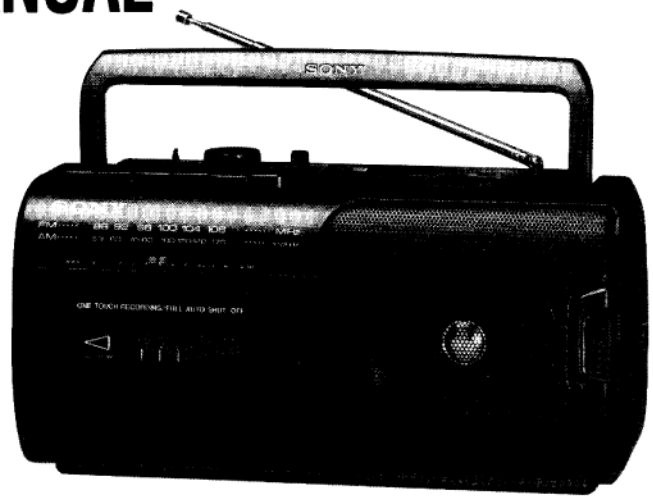

Photo : CFM-10

US Model
Canadian Model
UK Model
E Model
Australian Model
CFM-10
AEP Model
CFM-10/10L

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MF-10C

SPECIFICATIONS

Frequency range
CFM-10
US, Canadian, E models
FM : 87.6-108MHz
AM : 530-1,710kHz
AEP model
FM : 87.6-107MHz
AM : 531-1,602kHz
Italian model
FM : 87.5-108MHz
AM : 526.5-1,606.5kHz
Other models
FM : 87.6-108MHz
AM : 530-1,605kHz
CFM-10L
FM : 87.6-108MHz
LW : 153-279kHz
IF
FM : 10.7MHz
AM/LW : 455kHz

Antennas
FM : Telescope antenna
AM : Built-in ferrite bar antenna

Recording system
2-track, mono

Frequency response
100-8,000Hz

Speakers
Full-range : 7.7 cm (3 1/8 inches) dia. x1

Power output (US, Canadian, E, Australian models)
0.9 W
(at 10% harmonic distortion in DC operation)

Maximum power output
(AEP, UK, Italian, Singapore models)
0.9W

Output (EXCEPT US, Canadian, E models)
Earphone jack, 32 ohms impedance

Power requirements
US, Canadian, E models
120V AC, 60Hz
AEP, Italian models
220-230V AC, 50Hz
UK, Australian models
230-240V AC, 50Hz
Other models
110-120V/220-240V AC selectable, 50/60Hz
6V DC, four size D (R20) batteries

Power consumption
5W in AC operation

Battery life

FM recording	Playback
Sony R20P : Approx. 24 hours	Approx. 20hours
Sony LR20 alkaline : Approx. 55 hours	Approx. 50 hours

Dimensions
Approx. 272x130x121.5 mm (w/h/d)
(10 3/4x5 1/8x4 7/8 inches) incl. projecting parts and controls

Mass
US, Canadian, E models
Approx. 1.7kg (3lb 12 oz) including batteries
Other models
Approx. 1.5kg (3lb 5 oz) including batteries

Design and specifications are subject to change without notice.

RADIO CASSETTE-CORDER

9-960-488-12
2005E02-1
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Sony Corporation
Personal Audio Group
Published by Sony Engineering Corporation

SONY®

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.
REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer :
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers).
Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

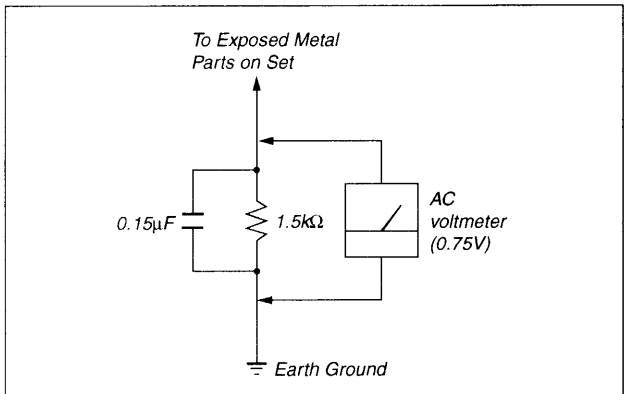
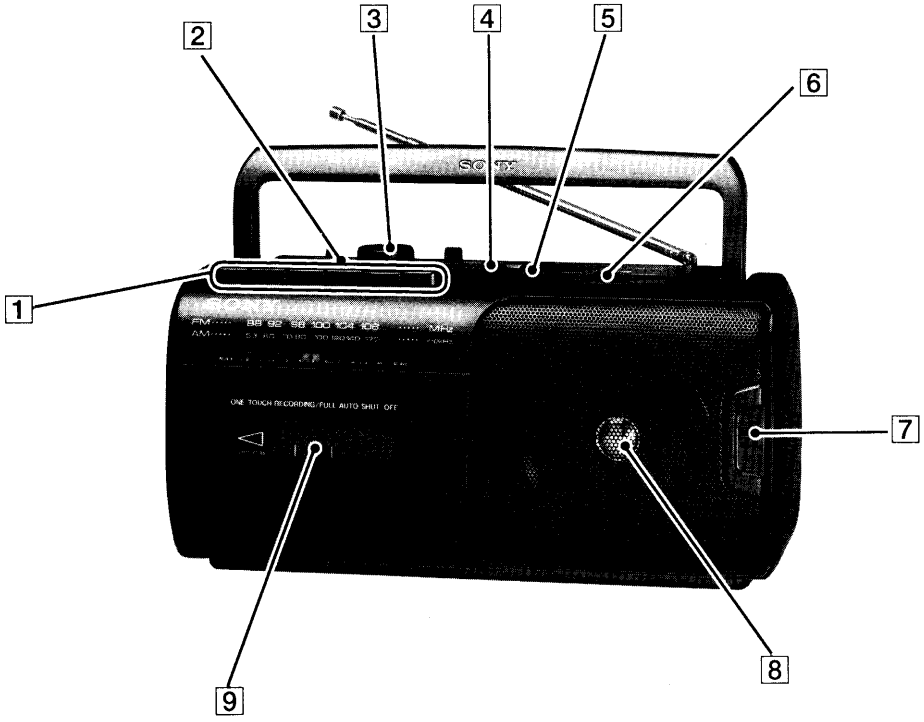


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
GENERAL

LOCATION AND FUNCTION CONTROLS



1 EARPHONE ⓖ
2 TAPE OPERATION BUTTONS
- ⏸ PAUSE
- ⏸⏏ STOP/EJECT
- ◀◀ FF (fast-forward)
- ▶▶ REW (rewind)
- ◀ PLAY (Play back)
- ● REC (Record)

3 VOLUME KNOB

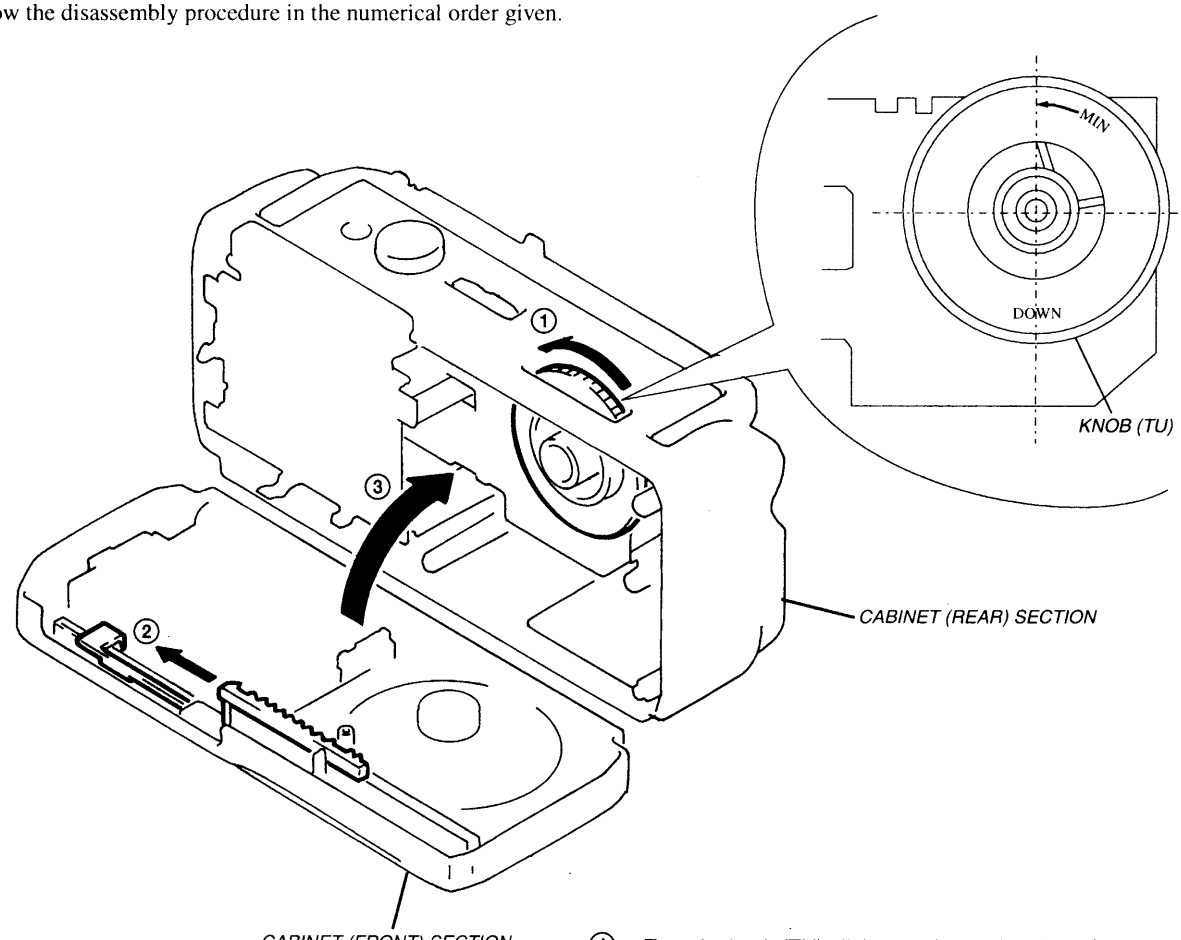
4 FUNCTION KNOB (TAPE (RADIO OFF) ⟷ FM ⟷ AM) (CFM-10)
FUNCTION KNOB (TAPE (RADIO OFF) ⟷ FM ⟷ LW) (CFM-10L)

5 OPR/BATT INDICATOR
6 TUNING KNOB
7 MIC (built-in)
8 SPEAKER
9 TAPE COMPARTMENT

SECTION 2

DIAL POINTER SETTING

Note : Follow the disassembly procedure in the numerical order given.



① *Turn the knob (TU) all the way in the direction of the arrow and set at a position as shown in the drawing (upper right)*

② *Move the Pointer Rack in the direction of the arrow until it stops.*

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS AND MEASUREMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head　pinch roller
   erase head　rubber belts
   capstan　idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque Meter	Meter Reading
Playback	CQ-102C	25 – 60g•cm (0.35 – 0.83 oz•inch)
Rewind	CQ-201B	55 – 140g•cm (0.77– 1.94 oz•inch)
Fast Forward	CQ-201B	55 – 140g•cm (0.77– 1.94 oz•inch)
Back Tention	CQ-102C	1 – 5g•cm (0.02– 0.06 oz•inch)

Tape Tension Measurement

Torque Meter	Meter Reading
CQ-403A	more than 170g (5.99 oz)

3-2. ELECTRICAL ADJUSTMENTS

CASSETTE SECTION

Note : The adjustment should be performed in the order given in this service manual.

- Switches and controls should be set as follows unless otherwise specified.
  FUNCTION ..... TAPE (RADIO OFF)
  VOLUME ..... max

Standard Output Level

	SP OUT	EARPHONE
load impedance	12Ω	32Ω
output level	0.775V (0dB)	0.25V (–10dB)

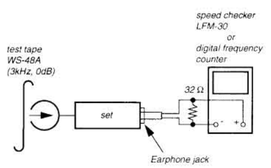
Test Tape

Type	Signal	Used for
WS-48A	3kHz, 0dB	Tape Speed Adjustment
P-4-A063	6.3kHz, – 10dB	Azimuth Adjustment

0 dB=0.775V

- **Tape Speed Adjustment**

Procedure :
Mode : playback

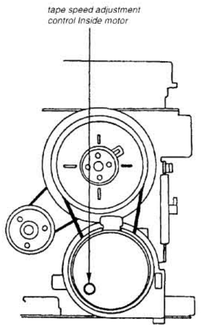


Adjustment Value :

Speed checker	Digital frequency counter
–1 to +1%	2,970 – 3,030 Hz

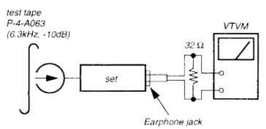
Frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz).

Adjustment Location :



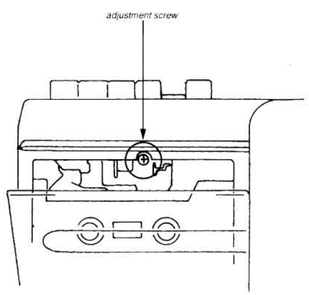
- **Record/Playback Head Azimuth Adjustment**

Procedure :
Mode : playback



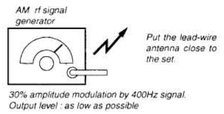
Turn the adjustment screw for the maximum output levels.

Adjustment Location :

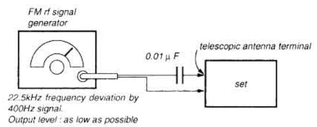


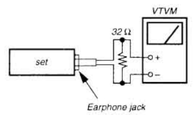
RADIO SECTION

- **AM Section**
  BAND switch : AM



- **FM Section**
  BAND switch : FM





- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

no mark : US, Canadian, E, Australian, Singapore, Thai model
( ) : AEP, UK model
(( )) : Italian model

AM IF ALIGNMENT			
Adjust for a maximum reading on VTVM.			
T2	455kHz	(455kHz)	((455kHz))

CFM-10

AM FREQUENCY CONVERAGE ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L6	520kHz	(520kHz)	((516kHz))
CT2	1,780kHz	(1,680kHz)	((1,630kHz))

AM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L3	620kHz	(620kHz)	((620kHz))
CT1	1,400kHz	(1,400kHz)	((1,400kHz))

CFM-10L

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L6	145kHz
CT2	300kHz

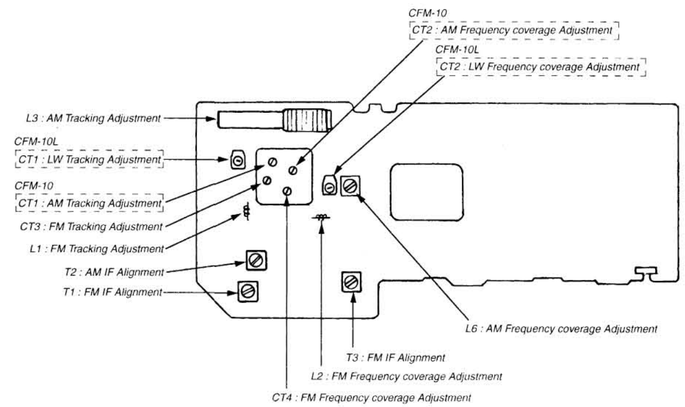
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	160kHz
CT1	260kHz

FM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
T1, T3	10.7MHz	(10.7MHz)	((10.7MHz))

FM FREQUENCY CONVERAGE ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L2	86.5MHz	(87.0MHz)	((87.35MHz))
CT4	109.5MHz	(108.3MHz)	((108.25MkHz))

FM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L1	86.5MHz	(87.0MHz)	((87.35MHz))
CT3	109.5MHz	(108.3MHz)	((108.25MkHz))

Adjustment Location :
[TUNER BOARD] – COMPONENT SIDE –


CFM-10
CT2 : AM Frequency coverage Adjustment
CFM-10L
CT2 : LW Frequency coverage Adjustment
L3 : AM Tracking Adjustment
CFM-10L
CT1 : LW Tracking Adjustment
CFM-10
CT1 : AM Tracking Adjustment
CT3 : FM Tracking Adjustment
L1 : FM Tracking Adjustment
T2 : AM IF Alignment
T1 : FM IF Alignment
L6 : AM Frequency coverage Adjustment
T3 : FM IF Alignment
L2 : FM Frequency coverage Adjustment
CT4 : FM Frequency coverage Adjustment

SECTION 4
DIAGRAMS

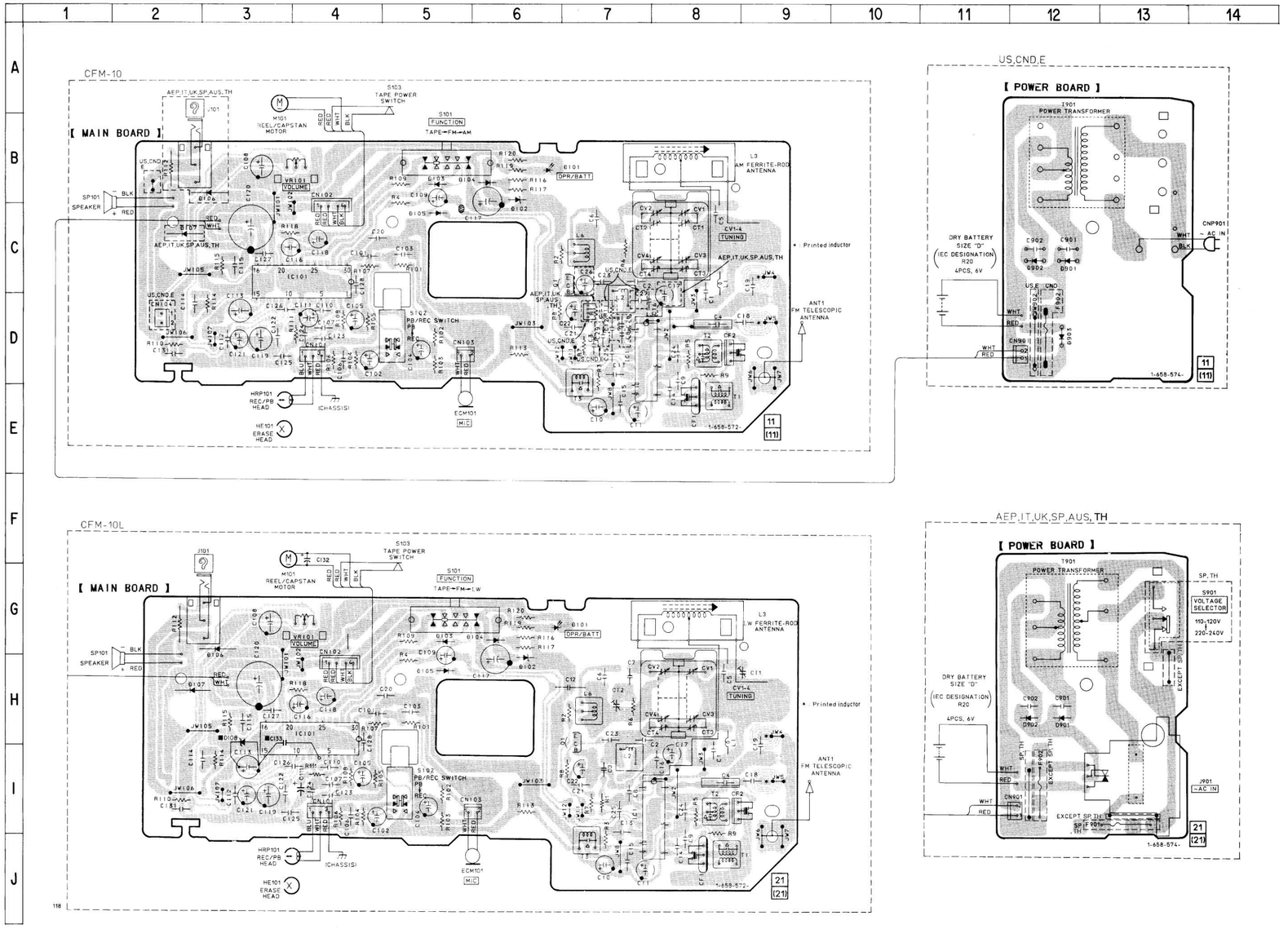
● SEMICONDUCTOR LOCATION

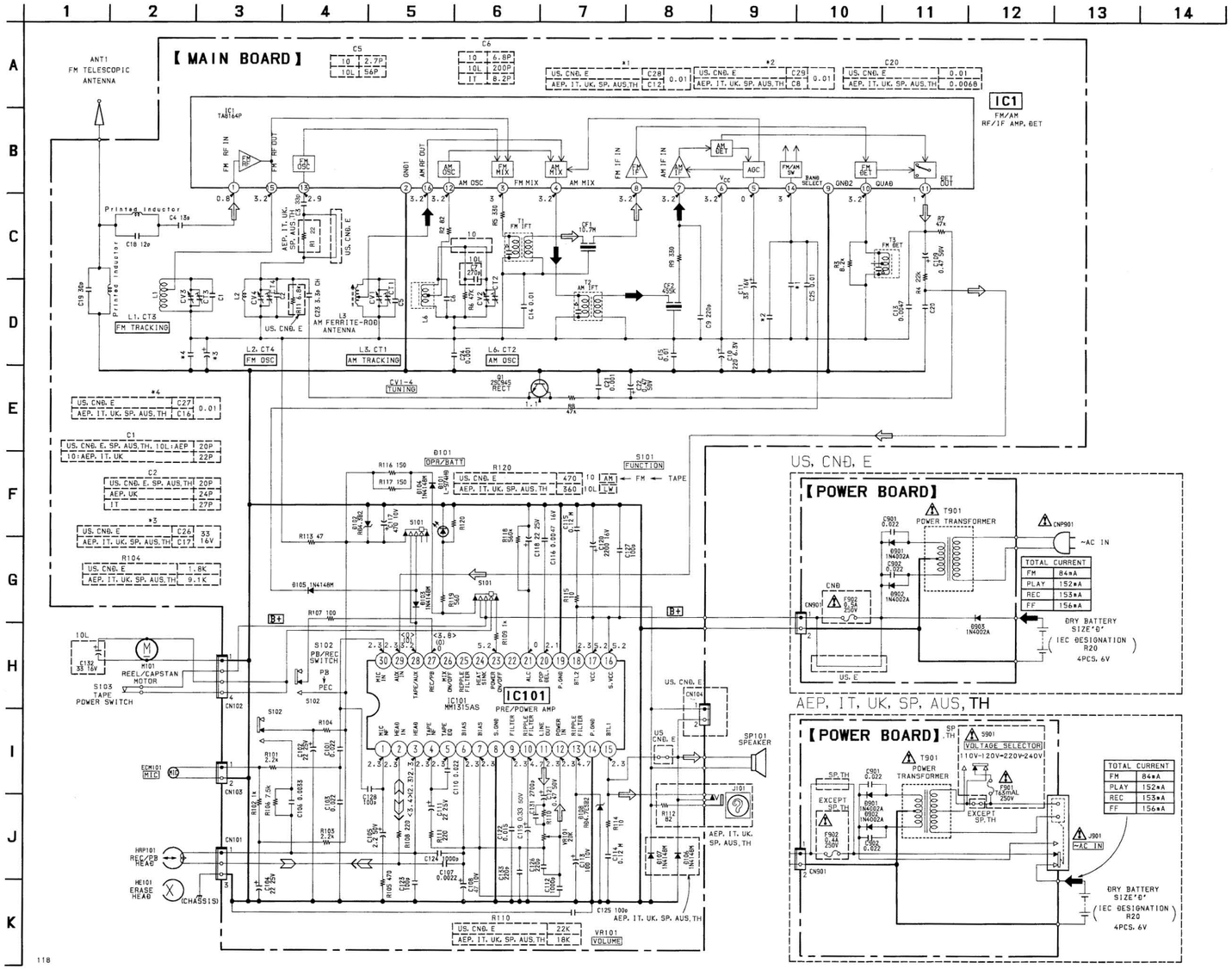
Ref. No.	Location (CFM-10)	Location (CFM-10L)
D101	B-6	G-6
D102	B-6	H-6
D103	B-5	G-5
D104	B-6	G-6
D105	C-5	H-5
D106	B-3	G-3
D107	C-2	H-2
D901	C-12	H-12
D902	C-12	H-12
D903	D-12	
IC1	D-7	I-7
IC101	C-4	H-4
Q1	C-7	H-7

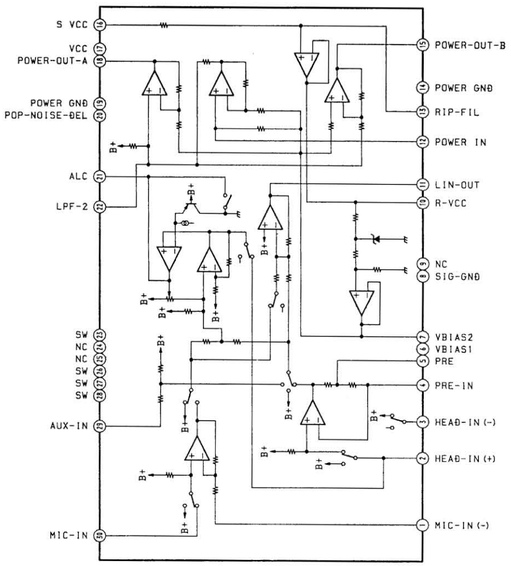
Note :

- △ : internal component.
- : Pattern from the side which seeing.
- Abbreviation
  CND : Canadian
  IT : Italian
  SP : Singapore
  AUS : Australian
  TH : Thai

4-1. PRINTED WIRING BOARDS







• IC BLOCK DIAGRAM
IC101 MM1315

Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- [ ] : panel designation.
- [ ] : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 6V and fed with regulated dc power supply from battery terminal.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.

no mark : FM
( ) : PLAY
〈 〉 : REC

- Voltages are taken with a VOM (10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ➡ : AM
  ⇒ : PB
  ⇛ : REC
- Abbreviation
  CND : Canadian
  IT : Italian
  SP : Singapore
  AUS : Australian
  TH : Thai

Ver. 1.1

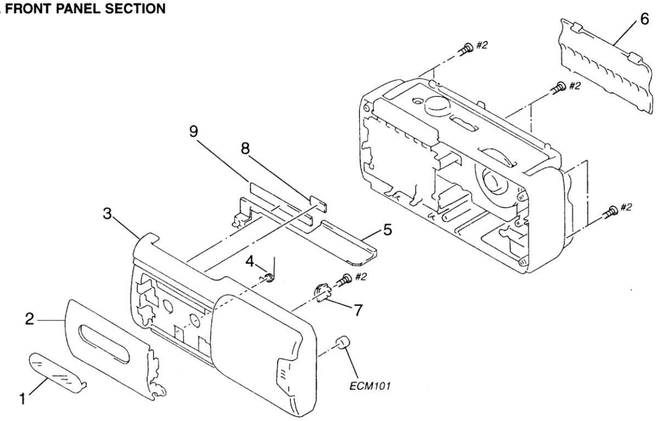
SECTION 5
EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ..... (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian
  IT : Italian
  SP : Singapore
  AUS : Australian
  TH : Thai

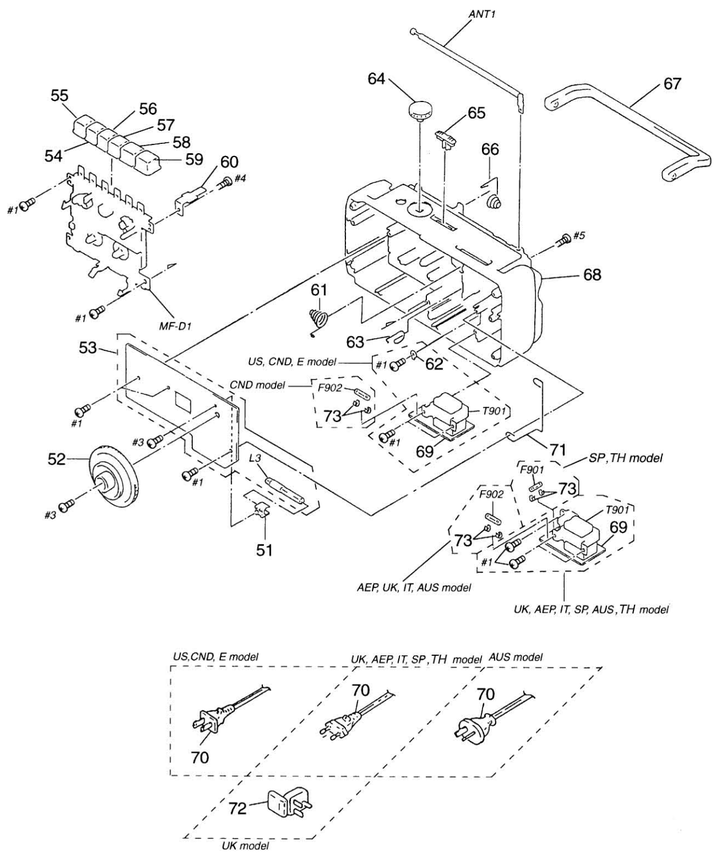
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	3-928-614-01	WINDOW, CASSETTE	
2	3-928-610-01	HOLDER (A), CASSETTE (BLACK)	
2	3-928-610-11	HOLDER (A), CASSETTE (WHITE)	(10:CND,UK,AEP,AUS,IT/10L)
3	X-3371-312-1	CABINET (FRONT) ASSY, SUB (BLACK)	(10:US,CND/10L)
3	X-3371-323-1	CABINET (FRONT) SUB ASSY (WHITE) (CND)	
3	X-3371-325-1	CABINET (FRONT) SUB ASSY (BLACK)	(10:UK,AEP)
3	X-3371-326-1	CABINET (FRONT) SUB ASSY (WHITE) (10L)	
3	X-3371-327-1	CABINET (FRONT) SUB ASSY (BLACK) (IT)	
3	X-3371-328-1	CABINET (FRONT) SUB ASSY (WHITE) (IT)	
3	X-3371-329-1	CABINET (FRONT) SUB ASSY (WHITE)	(10:UK,AEP)
3	X-3371-996-1	CABINET (FRONT) ASSY (BLACK) (E)	
3	X-3371-998-1	CABINET (FRONT) ASSY (BLACK) (AUS,SP,TH)	
3	X-3371-999-1	CABINET (FRONT) ASSY (WHITE) (AUS)	
4	3-911-263-01	SPRING, CASSETTE	
5	3-928-612-01	RACK, POINTER	
6	3-928-615-01	LID, BATTERY CASE (BLACK) (US,CND,E)	
6	3-928-615-11	LID, BATTERY CASE (WHITE) (CND)	
6	3-928-616-01	LID, BATTERY CASE (BLACK)	(10:AEP,UK,AUS,IT,SP,TH/10L)
6	3-928-616-11	LID, BATTERY CASE (WHITE)	(10:AEP,UK,AUS,IT/10L)
7	3-922-112-11	DAMPER	
* 8	1-660-409-11	PC BOARD, GUIDE (B)	
* 9	1-660-408-11	PC BOARD, GUIDE (A)	
ECM101	8-814-186-00	MICROPHONE, ELECTRET CONDENSER	

5-2. REAR CABINET SECTION



Ref. No.	Part No.	Description	Remark
* 51	3-913-791-01	HOLDER, BAR ANTENNA	
52	3-928-617-01	KNOB (TU) (BLACK)	
52	3-928-617-01	KNOB (TU) (WHITE)	
* 53	A-3305-480-A	MAIN BOARD, COMPLETE (US,CND,E)	
* 53	A-3305-482-A	MAIN BOARD, COMPLETE (10L)	
* 53	A-3305-484-A	MAIN BOARD, COMPLETE (10:UK,AEP)	
* 53	A-3305-486-A	MAIN BOARD, COMPLETE (IT)	
* 53	A-3305-729-A	MAIN BOARD, COMPLETE (SP,TH)	
* 53	A-3305-737-A	MAIN BOARD, COMPLETE (AUS)	
54	3-928-624-01	BUTTON (ST/EJ) (BLACK)	
54	3-928-624-11	BUTTON (ST/EJ) (WHITE)	
54	3-928-624-21	BUTTON (ST/EJ) (SILVER)	
55	3-928-625-01	BUTTON (PAUSE) (BLACK)	
55	3-928-625-11	BUTTON (PAUSE) (WHITE)	
55	3-928-625-21	BUTTON (PAUSE) (SILVER)	
56	3-928-623-01	BUTTON (FF) (BLACK)	
56	3-928-623-11	BUTTON (FF) (WHITE)	
56	3-928-623-21	BUTTON (FF) (SILVER)	
57	3-928-622-01	BUTTON (REW) (BLACK)	
57	3-928-622-11	BUTTON (REW) (WHITE)	
57	3-928-622-21	BUTTON (REW) (SILVER)	
58	3-928-620-01	BUTTON (PLAY) (BLACK)	
58	3-928-620-11	BUTTON (PLAY) (WHITE)	
58	3-928-620-21	BUTTON (PLAY) (SILVER)	
59	3-928-621-01	BUTTON (REC) (BLACK)	
59	3-928-621-11	BUTTON (REC) (WHITE)	
59	3-928-621-21	BUTTON (REC) (SILVER)	
* 60	3-928-627-01	SPRING, REC	
61	3-928-324-01	SPRING (MINUS), BATTERY (EXCEPT:SP)	
61	3-928-629-01	SPRING (MINUS), BATTERY (SP)	
* 62	1-660-407-11	PC BOARD, CORD STOPPER (US,CND,E)	
63	3-928-323-01	SPRING (PLUS), BATTERY	
64	3-928-618-01	KNOB (VOL) (BLACK)	
64	3-928-618-11	KNOB (VOL) (WHITE)	
65	3-928-619-01	KNOB (FUNCTION) (BLACK)	
65	3-928-619-11	KNOB (FUNCTION) (WHITE)	
66	3-911-268-01	SPRING (+,-), BATTERY	
67	3-928-611-01	HANDLE (BLACK)	
67	3-928-611-11	HANDLE (WHITE)	
68	3-928-608-01	CABINET (REAR) (BLACK) (US,CND,E)	
68	3-928-608-11	CABINET (REAR) (WHITE) (CND)	
68	3-928-609-01	CABINET (REAR) (BLACK) (10:UK,AEP,IT,AUS)	
68	3-928-609-11	CABINET (REAR) (WHITE) (10:UK,AEP,IT,AUS)	
68	3-928-609-21	CABINET (REAR) (BLACK) (10L)	
68	3-928-609-31	CABINET (REAR) (WHITE) (10L)	
68	3-928-609-41	CABINET (REAR) (BLACK) (SP,TH)	
69	1-658-574-11	POWER BOARD (US,CND,E)	
69	1-658-574-21	POWER BOARD (AEP,IT,UK,SP,AUS,TH)	
⚠ 70	1-776-131-11	CORD, POWER (US,CND,E)	
⚠ 70	1-696-819-11	CORD, POWER (AUS)	
⚠ 70	1-769-412-22	CORD, POWER (10:UK,AEP,IT,SP/10L)	
⚠ 70	1-551-983-00	CORD, POWER (E)	
71	3-928-630-01	TERMINAL, ANTENNA	
⚠ 72	1-770-019-21	ADAPTOR, CONVERSION 3P (UK)	
73	1-533-233-11	HOLDER, FUSE	
ANT1	1-501-820-11	ANTENNA, TELESCOPIC	
⚠ F901	1-532-233-00	FUSE (T63mAL/250V)(SP,TH)	
⚠ F902	1-532-066-00	FUSE (T0.4A 250V) (AEP,IT,UK,AUS)	
⚠ F902	1-532-819-11	FUSE (0.5A 250V) (CND)	
L3	1-501-805-11	ANTENNA, FERRITE-ROD (US,CND,E,SP,AUS)	
L3	1-501-817-11	ANTENNA, FERRITE-ROD (10:AEP,IT,UK,TH)	
L3	1-501-816-11	ANTENNA, FERRITE-ROD (LW) (10L)	
⚠ T901	1-429-272-11	TRANSFORMER, POWER (US,CND,E)	
⚠ T901	1-429-328-11	TRANSFORMER, POWER (AEP,IT,UK,AUS)	
⚠ T901	1-429-330-11	TRANSFORMER, POWER (SP,TH)	

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

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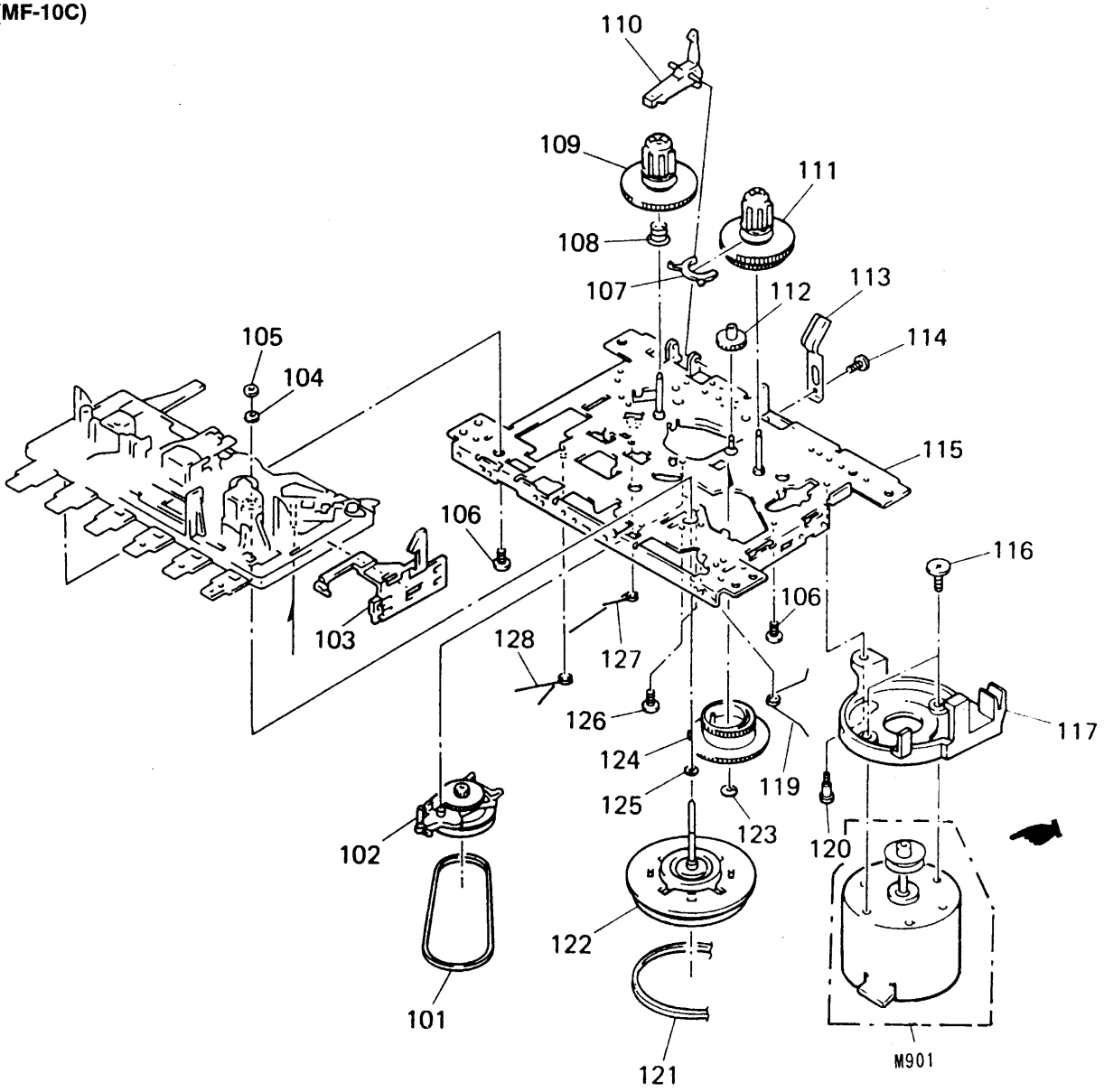
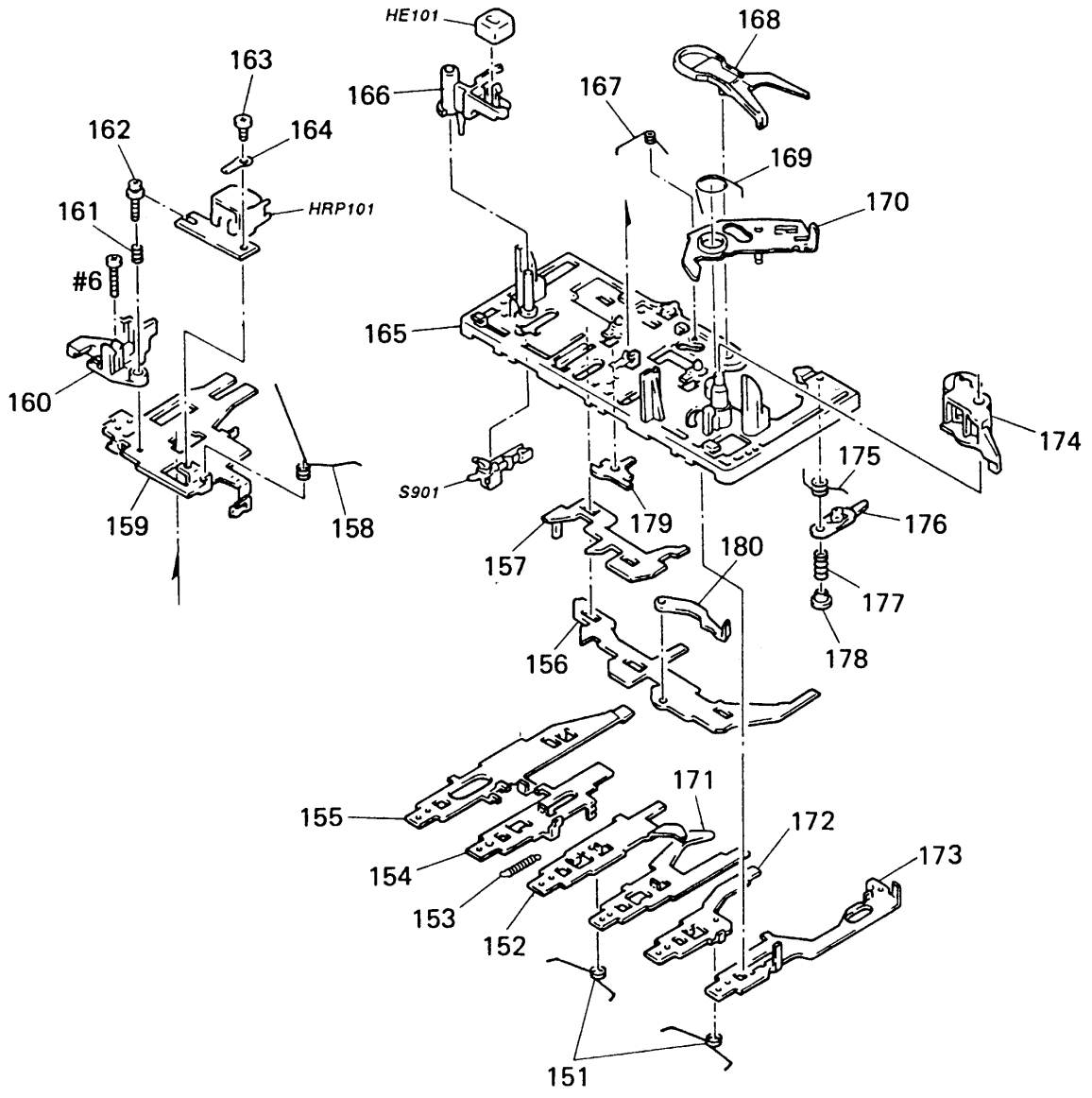
5-3. MECHANISM DECK SECTION (1)
(MF-10C)



Ref. No.	Part No.	Description	Remark
101	3-596-931-01	BELT, RF	
102	3-913-441-01	CLUTCH ASSY, RF	
103	3-348-366-01	LEVER, EJECT SLIDE	
104	3-913-442-01	WASHER, POLY-SLIDER	
105	3-913-434-01	WASHER, POLY-SLIDER	
106	3-348-370-01	SCREW (M2X5), P TIGHT BIND	
107	3-348-380-01	SENSOR	
108	3-913-429-01	SPRING, BACK TENSION	
109	3-913-430-01	REEL ASSY, SUPPLY	
110	3-348-368-01	LEVER, REC SAFETY	
111	3-913-431-01	REEL ASSY, TAKE-UP	
112	3-348-357-01	GEAR, FF	
113	3-348-367-01	PLATE, SP, PACK RETAINER	
114	3-348-369-01	SCREW (M2X3), C TIGHT	
115	3-348-335-01	CHASSIS ASSY	

Ref. No.	Part No.	Description	Remark
116	3-598-855-01	MOTOR COLLER SCREW	
117	3-913-435-01	BRACKET, MOTOR	
118	3-395-984-01	PULLEY, MOTOR	
119	3-348-336-01	SPRING	
120	3-395-995-01	SCREW, MB	
121	3-913-432-01	BELT, MAIN	
122	3-348-356-01	FLYWHEEL ASSY	
123	3-348-373-01	WASHER, POLYETHYLENE SLIDER	
124	3-348-353-01	GEAR, CAM	
125	3-913-433-01	WASHER, POLY-SLIDER	
126	3-348-371-01	SCREW (M2X4.5), CAMERA TAPPING	
127	3-348-341-01	SPRING	
128	3-348-337-01	SPRING	
M901	X-3372-889-1	MOTOR ASSY	

5-4. MECHANISM DECK SECTION (2)
(MF-10C)



Ref. No.	Part No.	Description	Remark
151	3-348-334-01	SPRING (A)	
* 152	3-394-739-01	LEVER, REW BUTTON	
153	3-913-436-01	SPRING (S), PLAY BUTTON LEVER	
* 154	3-394-738-01	LEVER, PLAY BUTTON	
* 155	3-394-737-01	LEVER, REC BUTTON	
* 156	3-348-323-01	PLATE, FUNCTION, PUSH BUTTON	
* 157	3-348-322-01	PLATE, FUNCTION, SWITCH	
158	3-394-744-01	SPRING	
* 159	3-395-986-01	PANEL, HEAD	
160	3-348-344-11	BASE, HEAD	
161	3-598-845-01	SPRING	
162	3-394-749-01	SCREW (M2X7), AZIMUTH	
163	3-348-372-01	SCREW (M2X3), + BIND	
164	3-394-748-01	LUG (B3)	
165	3-348-347-01	CHASSIS (MOLD) ASSY	
166	3-348-346-01	ARM, MG	
167	3-913-437-01	SPRING, M CONTROLLER	

Ref. No.	Part No.	Description	Remark
168	3-913-439-01	LEVER, SENSING	
169	3-348-351-01	SPRING	
* 170	3-913-440-01	PLATE ASSY, GEAR	
* 171	3-394-740-01	LEVER, FF BUTTON	
* 172	3-394-741-01	LEVER, STOP BUTTON	
* 173	3-394-742-01	LEVER, PAUSE BUTTON	
174	3-913-438-01	ARM ASSY, PINCH ROLLER	
175	3-348-330-11	SPRING	
176	3-348-331-02	LEVER, PAUSE	
177	3-348-332-01	SPRING	
178	3-348-333-01	STOPPER, PAUSE	
179	3-348-340-01	STOPPER, PR	
* 180	3-348-339-01	LEVER, E KICK	
HE101	1-500-232-11	HEAD, MAGNETIC (ERASE)	
HRP101	1-543-277-11	HEAD,MAGNETIC(RECORD/PLAYBACK)	
S901	1-692-978-11	SWITCH, LEAF (POWER)	

SECTION 6
ELECTRICAL PARTS LIST

MAIN

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation
  CND : Canadian
  IT : Italian
  SP : Singapore
  AUS : Australian
  TH : Thai

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3305-480-A	MAIN BOARD, COMPLETE (US,CND,E)			
*	A-3305-484-A	MAIN BOARD, COMPLETE (10:AEP,UK)			
*	A-3305-486-A	MAIN BOARD, COMPLETE (IT)			
*	A-3305-737-A	MAIN BOARD, COMPLETE (AUS)			
*	A-3305-729-A	MAIN BOARD, COMPLETE (SP,TH)			
*	A-3305-482-A	MAIN BOARD, COMPLETE (10L)			
		**********			
*	3-913-791-01	HOLDER, BAR ANTENNA			
	3-928-617-01	KNOB (TU)			
	7-621-770-87	SCREW +B 2.6X5			
		< CAPACITOR >			
C1	1-162-207-31	CERAMIC	22PF	5%	50V (10:AEP,IT,UK)
C1	1-162-206-31	CERAMIC	20PF	5%	50V (US,CND,E,SP,AUS,TH,10L:AEP)
C2	1-102-960-00	CERAMIC	24PF	5%	50V (AEP,UK)
C2	1-102-958-00	CERAMIC	20PF	5%	50V (US,CND,E,SP,AUS,TH)
C2	1-102-961-00	CERAMIC	27PF	5%	50V (IT)
C3	1-128-803-21	CERAMIC	33PF	5%	50V
C4	1-162-202-31	CERAMIC	13PF	5%	50V
C5	1-162-217-31	CERAMIC	56PF	5%	50V (10L)
C5	1-162-192-31	CERAMIC	2.7PF	10%	50V (10)
C6	1-130-918-00	FILM	200PF	5%	63V (10L)
C6	1-162-197-31	CERAMIC	6.8PF	10%	50V (10)
C6	1-162-198-31	CERAMIC	8.2PF	10%	50V (IT)
C7	1-130-011-00	FILM	270PF	5%	63V (10L)
C8	1-162-306-11	CERAMIC	0.01uF	30%	16V (AEP,IT,UK,SP,AUS,TH)
C9	1-162-286-31	CERAMIC	220PF	10%	50V

Ref. No.	Part No.	Description			Remark
C10	1-104-666-11	ELECT	220uF	20%	6.3V
C11	1-104-663-11	ELECT	33uF	20%	16V
C12	1-162-306-11	CERAMIC	0.01uF	30%	16V (AEP,IT,UK,SP,AUS,TH)
C13	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C14	1-162-306-11	CERAMIC	0.01uF	30%	16V
C15	1-162-306-11	CERAMIC	0.01uF	30%	16V
C16	1-162-306-11	CERAMIC	0.01uF	30%	16V (AEP,IT,UK,SP,AUS,TH)
C17	1-104-663-11	ELECT	33uF	20%	16V (AEP,IT,UK,SP,AUS,TH)
C18	1-162-201-31	CERAMIC	12PF	5%	50V
C19	1-102-962-00	CERAMIC	30PF	5%	50V
C20	1-162-305-11	CERAMIC	0.0068uF	30%	16V (AEP,IT,UK,SP,AUS,TH)
C20	1-162-306-11	CERAMIC	0.01uF	30%	16V (US,CND,E)
C21	1-162-294-31	CERAMIC	0.001uF	10%	50V
C22	1-124-902-00	ELECT	0.47uF	20%	50V
C23	1-162-193-31	CERAMIC	3.3PF	10%	50V
C24	1-162-294-31	CERAMIC	0.001uF	10%	50V
C25	1-162-306-11	CERAMIC	0.01uF	20%	16V
C26	1-104-663-11	ELECT	33uF	20%	16V (US,CND,E)
C27	1-162-306-11	CERAMIC	0.01uF	30%	16V (US,CND,E)
C28	1-162-306-11	CERAMIC	0.01uF	30%	16V (US,CND,E)
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V (US,CND,E)
C101	1-162-843-11	CERAMIC	0.022uF	10%	16V
C102	1-126-233-11	ELECT	22uF	20%	50V
C103	1-162-843-11	CERAMIC	0.022uF	10%	16V
C104	1-126-233-11	ELECT	22uF	20%	50V
C105	1-126-961-11	ELECT	2.2uF	20%	50V
C106	1-161-045-00	CERAMIC	0.0033uF	10%	50V
C107	1-161-043-00	CERAMIC	0.0022uF	10%	50V
C108	1-126-947-00	ELECT	47uF	20%	10V
C109	1-124-902-00	ELECT	0.47uF	20%	50V
C110	1-162-843-11	CERAMIC	0.022uF	10%	16V

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MAIN

Ref. No.	Part No.	Description			Remark
C111	1-126-233-11	ELECT	22uF	20%	25V
C112	1-162-294-31	CERAMIC	0.001uF	10%	50V
C113	1-124-443-00	ELECT	100uF	20%	10V
C114	1-130-496-00	MYLAR	0.12uF	5%	50V
C115	1-130-496-00	MYLAR	0.12uF	5%	50V
C116	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C117	1-124-472-11	ELECT	470uF	20%	10V
C118	1-126-233-11	ELECT	22uF	20%	50V
C119	1-136-171-11	FILM	0.33uF	5%	50V
C120	1-126-768-11	ELECT	2200uF	20%	16V
C121	1-124-902-00	ELECT	0.47uF	20%	50V
C122	1-162-841-11	CERAMIC	0.015uF	10%	16V
C123	1-162-282-31	CERAMIC	100PF	10%	50V
C124	1-162-294-31	CERAMIC	0.001uF	10%	50V
C125	1-162-282-31	CERAMIC	100PF	10%	50V
C126	1-162-286-31	CERAMIC	220PF	10%	50V
C127	1-162-282-31	CERAMIC	100PF	10%	50V
C128	1-162-282-31	CERAMIC	100PF	10%	50V
C131	1-162-832-11	CERAMIC	2700PF	10%	
C132	1-131-374-00	TANTAL	33uF	20%	16V (10L)
C133	1-162-286-31	CERAMIC	220PF	10%	50V
		< FILTER >			
CF1	1-567-390-11	FILTER,CERAMIC 10.7M			
CF2	1-577-072-11	FILTER, CERAMIC			
		< CONNECTOR >			
CN101	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN102	1-566-779-11	PIN, CONNECTOR (PC BOARD) 4P			
* CN103	1-580-163-11	PIN, CONNECTOR (PC BOARD) 2P			
* CN104	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P(US,CND,E)			
		< TRIMMER >			
CT1	1-141-416-11	CAP, ADJ (10L)			
CT2	1-141-416-11	CAP, ADJ (10L)			
		< TRIMMER >			
CT1-4	1-151-628-11	CAP, VARIABLE (TUNING) (US,CND,E,SP,AUS,TH)			
CT1-4	1-151-673-11	CAP, VARIABLE (TUNING) (10:AEP,IT,UK)			
CV1-4, CT3-4	1-151-637-11	CAP, VARIABLE (TUNING)(10L)			
		< DIODE >			
D101	8-719-057-90	LED	L-974HD (OPR/BATT)		
D102	8-719-109-75	DIODE	RD4.3ES-B2		
D103	8-719-987-63	DIODE	1N4148M		
D104	8-719-987-63	DIODE	1N4148M		
D105	8-719-987-63	DIODE	1N4148M		
D106	8-719-987-63	DIODE	1N4148M (AEP,IT,UK,SP,AUS,TH)		
D107	8-719-987-63	DIODE	1N4148M (AEP,IT,UK,SP,AUS,TH)		
D108	8-719-109-81	DIODE	RD4.7ESB2		

Ref. No.	Part No.	Description			Remark
		< IC >			
IC1	8-759-245-07	IC TA8164P			
IC101	8-759-440-96	IC MM1315AS			
		< JACK >			
J101	1-563-330-11	JACK (EAR PHONE) (AEP,IT,UK,SP,AUS,TH)			
		< COIL >			
L1	1-422-317-31	COIL, AIR-CORE			
L2	1-422-230-11	COIL, AIR-CORE (US,CND,AEP,UK,E,SP,AUS,TH)			
L2	1-411-333-11	COIL (WITH CORE) (IT)			
L3	1-501-805-11	ANTENNA, FERRITE-ROD (US,CND,E,SP,AUS,TH)			
L3	1-501-817-11	ANTENNA, FERRITE-ROD (10:AEP,IT,UK)			
L3	1-501-816-11	ANTENNA, FERRITE-ROD (LW) (10L)			
L6	1-406-576-11	COIL MW OSC (10)			
L6	1-406-252-11	COIL (OSC) (10L)			
		< TRANSISTOR >			
Q1	8-729-194-57	TRANSISTOR 2SC945-P			
		< RESISTOR >			
R1	1-247-791-91	CARBON	22	5%	1/4W (AEP,IT,UK,SP,AUS,TH)
R2	1-249-440-11	CARBON	82	5%	1/4W
R3	1-249-428-11	CARBON	8.2K	5%	1/4W
R4	1-249-443-11	CARBON	22K	5%	1/4W
R5	1-249-411-11	CARBON	330	5%	1/4W
R6	1-247-871-11	CARBON	47K	5%	1/4W
R7	1-247-871-11	CARBON	47K	5%	1/4W
R8	1-247-871-11	CARBON	47K	5%	1/4W
R9	1-249-411-11	CARBON	330	5%	1/4W
R11	1-249-427-11	CARBON	6.8K	5%	1/4W (US,CND,E)
R101	1-247-839-11	CARBON	2.2K	5%	1/4W
R102	1-249-417-11	CARBON	1K	5%	1/4W
R103	1-247-839-11	CARBON	2.2K	5%	1/4W
R104	1-249-420-11	CARBON	1.8K	5%	1/4W (US,CND,E)
R104	1-247-854-11	CARBON	9.1K	5%	1/4W (AEP,IT,UK,SP,AUS,TH)
R105	1-249-413-11	CARBON	470	5%	1/4W
R106	1-247-852-11	CARBON	7.5K	5%	1/4W
R107	1-247-807-31	CARBON	100	5%	1/4W
R108	1-247-815-91	CARBON	220	5%	1/4W
R109	1-249-417-11	CARBON	1K	5%	1/4W
R110	1-247-863-91	CARBON	22K	5%	1/4W (US,CND,E)
R110	1-249-432-11	CARBON	18K	5%	1/4W (AEP,IT,UK,SP,AUS,TH)
R111	1-247-815-91	CARBON	220	5%	1/4W

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MAIN POWER

Ref. No.	Part No.	Description				Remark
R112	1-249-440-11	CARBON	82	5%	1/4W	(AEP,IT,UK,SP,AUS,TH)
R113	1-249-401-11	CARBON	47	5%	1/4W	
R114	1-249-393-11	CARBON	10	5%	1/4W	
R115	1-249-393-11	CARBON	10	5%	1/4W	
R116	1-249-407-11	CARBON	150	5%	1/4W	
R117	1-249-407-11	CARBON	150	5%	1/4W	
R118	1-247-897-11	CARBON	560K	5%	1/4W	
R119	1-249-414-11	CARBON	560	5%	1/4W	
R120	1-249-413-11	CARBON	470	5%	1/4W	(US,CND,E)
R120	1-247-820-11	CARBON	360	5%	1/4W	(AEP,IT,UK,SP,AUS,TH)
		< SWITCH >				
S101	1-762-535-11	SWITCH, SLIDE (FUNCTION)				
S102	1-762-565-11	SWITCH, R/P (PB/REC SW)				
		< TRANSFORMER >				
T1	1-406-577-11	TRANSFORMER, IF				
T2	1-406-575-11	TRANSFORMER, IF				
T3	1-406-578-11	COIL, FM DETECTOR				
		< VARIABLE RESISTOR >				
VR101	1-223-625-11	RES, VAR, CARBON 20K (VOLUME)				
**********						
*	1-658-574-11	POWER BOARD (US,CND,E)				
*	1-658-574-21	POWER BOARD (AEP,IT,UK,SP,AUS,TH)				
		**********				
	1-533-233-11	HOLDER, FUSE				
		< CAPACITOR >				
C901	1-101-005-00	CERAMIC	22000PF		50V	
C902	1-101-005-00	CERAMIC	22000PF		50V	
		< CONNECTOR >				
CN901	1-580-163-11	PIN, CONNECTOR (PC BOARD) 2P				
		< CONNECTOR >				
CNP901	1-696-008-31	CORD, AC (US,CND,E)				
		< DIODE >				
D901	8-719-200-02	DIODE 10E2				
D902	8-719-200-02	DIODE 10E2				
D903	8-719-200-02	DIODE 10E2 (US,CND,E)				
		< FUSE >				
⚠ F901	1-532-233-00	FUSE (T63mAL/250V)(SP,TH)				
⚠ F902	1-532-006-00	FUSE (T0.4A 250V)(AEP,IT,UK,AUS)				
⚠ F902	1-532-819-11	FUSE (0.5A 250V)(CND)				

Ref. No.	Part No.	Description	Remark
		< JACK >	
⚠ J901	1-526-838-11	INLET, AC 2P (~AC IN)(AEP,IT,UK,SP,AUS,TH)	
		< SWITCH >	
⚠ S901	1-552-921-00	SWITCH, POWER (VOLTAGE SELECTOR)(SP,TH)	
		< TRANSFORMER >	
⚠ T901	1-429-272-11	TRANSFORMER, POWER (US,CND,E)	
⚠ T901	1-429-328-11	TRANSFORMER, POWER (AEP,IT,UK,AUS)	
⚠ T901	1-429-330-11	TRANSFORMER, POWER (SP,TH)	
**********			
		MISCELLANEOUS	
		**********	
* 8	1-660-409-11	PC BOARD, GUIDE (B)	
* 9	1-660-408-11	PC BOARD, GUIDE (A)	
⚠ 70	1-551-983-00	CORD, POWER (E)	
⚠ 70	1-696-819-11	CORD, POWER (AUS)	
⚠ 70	1-769-412-22	CORD, POWER (10:UK,AEP,IT,SP,TH/10L)	
⚠ 70	1-776-131-11	CORD, POWER (US,CND)	
⚠ 72	1-770-019-21	ADAPTOR, CONVERSION 3P (UK)	
ANT1	1-501-820-11	ANTENNA, TELESCOPIC	
ECM101	8-814-186-00	MICROPHONE, ELECTRET CONDENSER	
⚠ F901	1-532-233-00	FUSE (T63mAL/250V)(SP,TH)	
⚠ F902	1-532-066-00	FUSE (T0.4A 250V) (AEP,IT,UK,AUS)	
⚠ F902	1-532-819-11	FUSE (0.5A 250V) (CND)	
HE101	1-500-232-11	HEAD, MAGNETIC (ERASE)	
HRP101	1-543-277-11	HEAD,MAGNETIC(RECORD/PLAYBACK)	
M901	X-3372-889-1	MOTOR ASSY	
S901	1-692-978-11	SWITCH, LEAF (POWER)	
⚠ T901	1-429-272-11	TRANSFORMER, POWER (US,CND,E)	
⚠ T901	1-429-328-11	TRANSFORMER, POWER (AEP,IT,UK,AUS)	
⚠ T901	1-429-330-11	TRANSFORMER, POWER (SP,TH)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-696-819-11	CORD, POWER (AUS)	
	1-769-412-11	CORD, POWER (10:UK,AEP,IT,SP, TH/10L)	
	1-770-019-21	ADAPTOR, CONVERSION PLUG 3P (UK)	
	3-810-277-11	MANUAL, INSTRUCTION (English) (US)	
	3-810-277-21	MANUAL, INSTRUCTION (English) (CND,E,AUS)	
	3-810-277-31	MANUAL, INSTRUCTION (French) (CND)	
	3-810-277-41	MANUAL, INSTRUCTION (English,French,German,Spanish) (10:UK,AEP,SP, TH/10L)	
	3-810-277-51	MANUAL, INSTRUCTION (Dutch,Swedish,Italian,Portuguese)(10:AEP,IT/10L)	
	3-810-277-61	MANUAL, INSTRUCTION (Spanish)(E)	
**********			

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Desc ription	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3	
#3	7-621-770-87	SCREW +B 2.6X5	
#4	7-685-782-01	SCREW +PTT 2X5 (S)	
#5	7-682-547-04	SCREW +B 3X6	
#6	7-621-255-45	SCREW +P 2X6	

CFM-10/10L

SONY

SERVICE MANUAL

US Model
Canadian Model
UK Model
E model
Australian model
CFM-10
AEP Model
CFM-10/10L

SUPPLEMENT-1

File this supplement with whe service manual.

Subject: Model Addition (CFM-10: Hong Kong)

• For detailed Hong Kong model refer to Singapore model (CFM-10)

Difference Table

Page	CFM-10 (Singapore model)			CFM-10 (Hong Kong model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
21		————			1-770-019-21	ADAPTOR, CONVERSION PLUG 3P
	*	3-932-708-01	CARTON, INDIVIDUAL	*	3-937-685-01	CARTON, INDIVIDUAL

NOTE:
• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

9-960-488-81

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Consumer A&V Products Company
Personal A&V Products Div.

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CFM-10/10L

SONY

SERVICE MANUAL

US Model
Canadian Model
UK Model
E Model
Australian Model
CFM-10

AEP Model
CFM-10/10L

SUPPLEMENT-2

File this Supplement with the Service Manual.

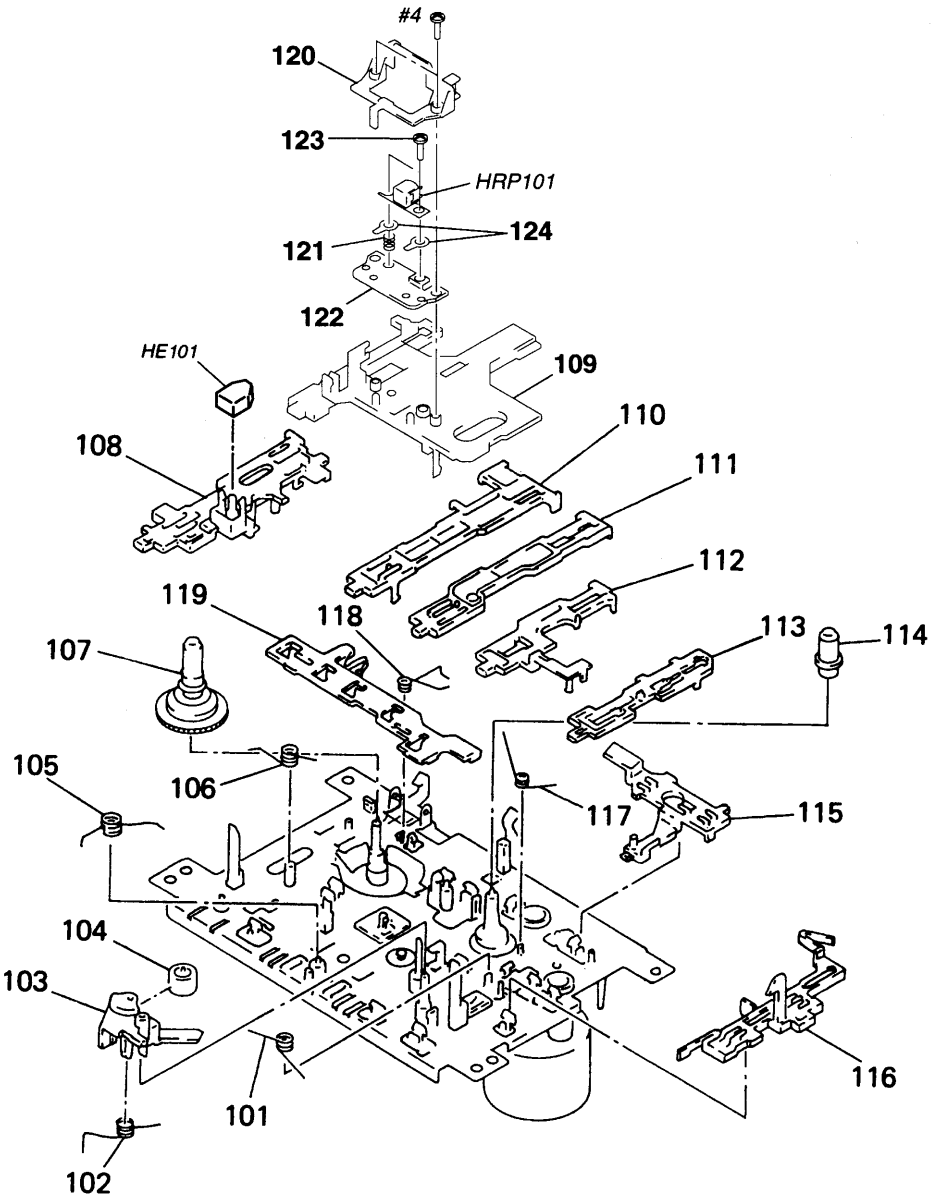
Subject :
Change of Tape Transport Mechanism

The tape transport mechanism has been changed.
Exploded views of new type, and changed parts list are described in this Supplement-2.
Refer to original service manual previously issued for the other information.

	Tape Transport Mechanism Type	Serial Number
Former Type	MF-10C	————
New Type	MF-M10-117	0782939 and later

EXPLODED VIEWS (Service Manual see page 17)

1. MECHANISM DECK SECTION (1)
(MF-M10-117)

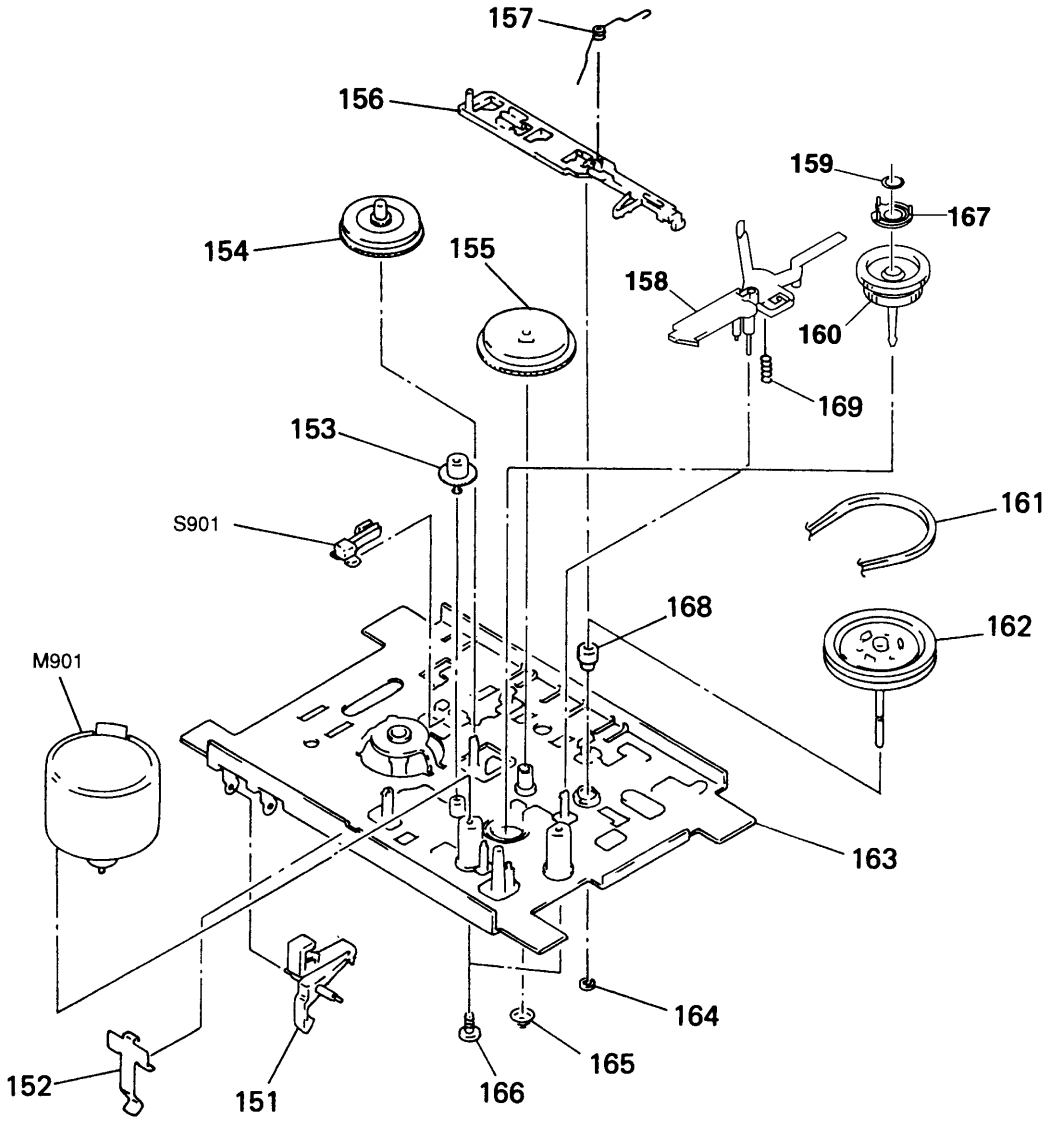


Ref. No.	Part No.	Description	Remark
101	3-933-010-01	SPRING (S/P), TORSION	
102	3-933-025-01	SPRING (P), TORSION	
103	3-933-026-01	LEVER (P)	
104	3-933-024-01	ROLLER, PINCH	
105	3-933-019-01	SPRING (F/R), TORSION	
106	3-933-028-01	SPRING (FWD), TORSION	
107	3-933-016-01	GEAR (S REEL)	
108	3-933-023-01	SLIDER (REC)	
109	3-933-022-11	BASE, HEAD	
* 110	3-933-017-01	SLIDER (REW)	
* 111	3-933-018-01	SLIDER (FF)	
* 112	3-933-009-01	SLIDER (STOP)	
* 113	3-933-008-01	SLIDER (PAUSE)	
114	3-933-004-01	CLAW, REEL	

Ref. No.	Part No.	Description	Remark
* 115	3-933-021-01	SLIDER (FRP)	
116	3-933-006-01	SLIDER (EJECT)	
117	3-934-833-01	SPRING (FRP)	
118	3-934-834-01	SPRING (BT)	
* 119	3-933-007-01	PLATE, LOCK	
120	3-010-625-01	GUIDE, TAPE	
121	4-936-201-01	SPRING	
* 122	3-009-076-01	CHASSIS (HEAD)	
123	3-342-917-01	SCREW +B 2X5	
* 124	3-936-265-01	LUG (T)	
HE101	1-500-232-11	HEAD, MAGNETIC (ERASE)	
HRP101	1-500-363-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	

(Service Manual see page 18)

2. MECHANISM DECK SECTION (2)
(MF-M10-117)



Ref. No.	Part No.	Description	Remark
151	3-933-029-01	LEVER, ERASING PREVENTION	
152	3-933-182-01	SPRING, CASSETTE	
153	3-932-995-01	GEAR (MID)	
154	X-3371-667-1	CLUTCH ASSY	
155	3-932-997-01	GEAR (CAM)	
* 156	3-932-999-01	SLIDER (SW)	
157	3-932-998-01	SPRING (GROUND), TORSION	
158	3-009-648-01	LEVER (S.OFF)	
159	3-009-650-02	SPRING (K)	
160	X-3373-572-1	REEL ASSY (N), T	
161	3-933-020-01	BELT	

Ref. No.	Part No.	Description	Remark
162	X-3371-668-1	CAPSTAN ASSY	
163	3-932-993-01	CHASSIS, OUTSERT	
164	3-343-358-01	RING, RETAINING	
165	3-933-005-01	SPRING (CAM), COMPRESSION	
166	7-621-770-87	SCREW +B 2.6X5	
167	3-936-438-01	LEVER (K)	
168	3-934-336-01	BEARING	
169	3-939-383-01	SPRING, COMPRESSION	
M901	A-3304-621-A	MOTOR ASSY	
S901	1-762-679-11	SWITCH, LEAF (POWER)	

9-960-488-83

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CFM-10/10L

SONY

SERVICE MANUAL

Ver 1.0 1999. 06

US Model
Canadian Model
UK Model
E Model
Australian Model
CFM-10
AEP Model
CFM-10/10L

SUPPLEMENT - 3

File this Supplement with the Service Manual.

Subject :

- **CHANGE OF MAIN BOARD**
  (CFM-10 : US, Canadian, C&SA model only)
  1-658-572-11 ➡ 1-658-572-31

(ECN-RC802092)

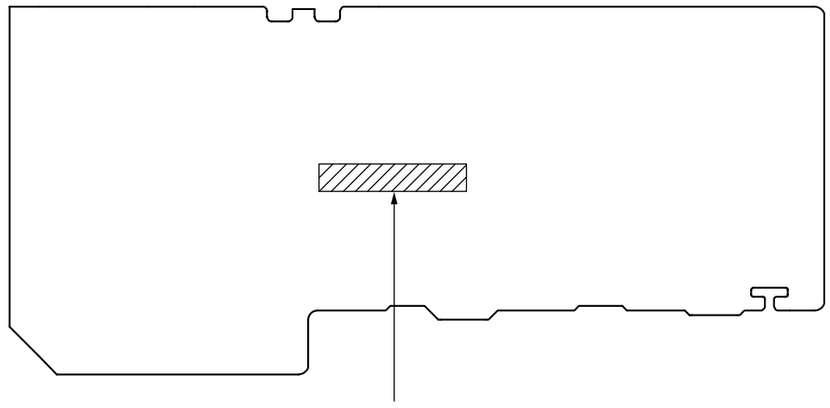
Due to this change, only printed wiring boards, schematic diagram and a electrical parts list of CFM-10 (US, Canadian, C&SA model) are described in this supplement-3.
For other information, please refer to the previously issued CFM-10/10L service manual (9-960-488-11), Supplement-1 (9-960-488-81) and Supplement-2 (9-960-488-83).

- Abbreviation
  C&SA : Central & South America

- **CHANGE OF MAIN BOARD (CFM-10 : US, Canadian, C&SA model only)**

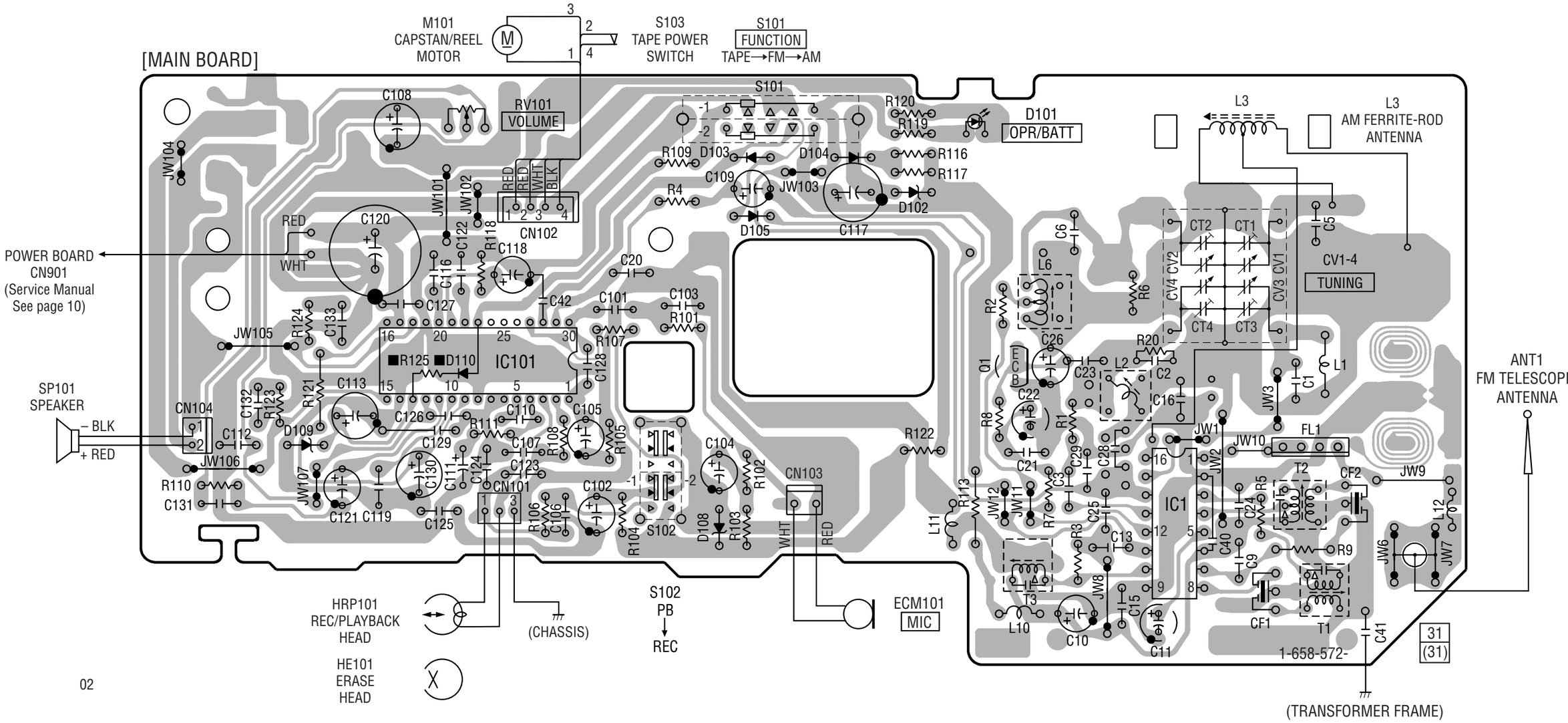
  NEW TYPE IDENTIFICATION

[MAIN BOARD] (COMPONENT SIDE)



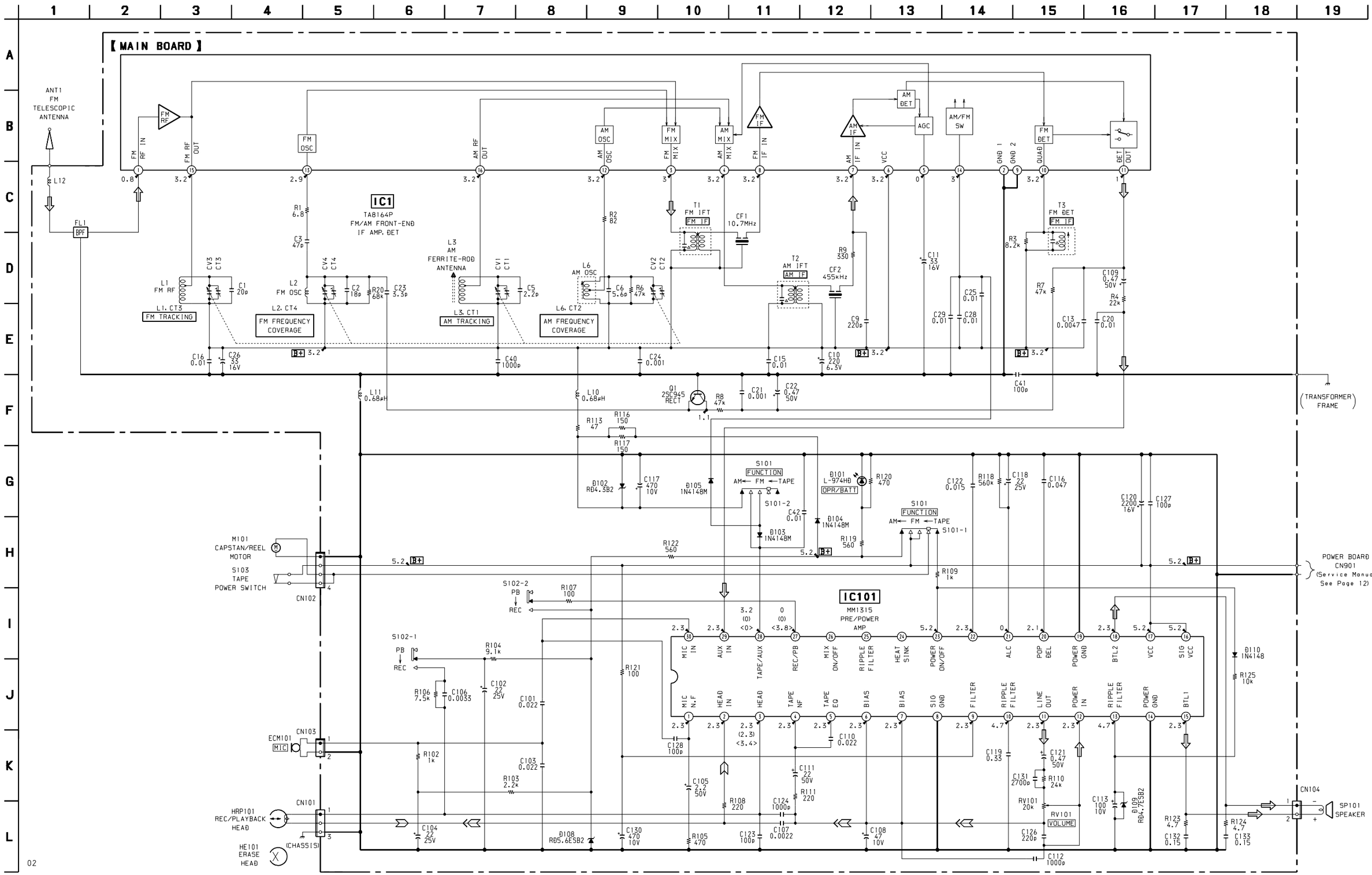
Former Type: 1-658-572-11
New Type: 1-658-572-**31**

- **PRINTED WIRING BOARD (CFM-10 : US, Canadian, C&SA model only)**
  (Service Manual See page 9, 10)



Note:
- ○——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
  C&SA : Central and South America

● **SCHEMATIC DIAGRAM (CFM-10 : US, Canadian, C&SA model only)** (Service Manual See page 11, 12)



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : PB
  ⇨ : REC
- Abbreviation
  C&SA : Central and South America

• ELECTRICAL PARTS LIST (US, Canadian, C&SA model only) (Service Manual See page 19 to 21)

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ , for example :
  uA.... : µ A.... , uPA.... : µ PA....
  uPB.... : µ PB.... , uPC.... : µ PC....
  uPD.... : µ PD....
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H

When indicating parts by reference number, please include the board.

- Abbreviation
  C&SA : Central & South America

Ref. No.	Part No.	Description			Remark
*	A-3305-480-A	MAIN BOARD, COMPLETE			
		**********			
*	3-913-791-01	HOLDER, BAR ANTENNA			
	7-621-770-87	SCREW +B 2.6X5			
		< CAPACITOR >			
C1	1-162-206-31	CERAMIC	20PF	5%	50V
C2	1-102-953-00	CERAMIC	18PF	5%	50V
C3	1-102-852-91	CERAMIC	47PF	5%	50V
C5	1-162-191-31	CERAMIC	2.2PF	10%	50V
C6	1-162-196-31	CERAMIC	5.6PF	10%	50V
C9	1-162-286-21	CERAMIC	220PF	10%	50V
C10	1-104-666-11	ELECT	220uF	20%	6.3V
C11	1-104-663-11	ELECT	33uF	20%	16V
C13	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C15	1-162-306-11	CERAMIC	0.01uF	30%	16V
C16	1-162-306-11	CERAMIC	0.01uF	30%	16V
C20	1-162-306-11	CERAMIC	0.01uF	30%	16V
C21	1-162-294-31	CERAMIC	0.001uF	10%	50V
C22	1-126-959-11	ELECT	0.47uF	20%	50V
C23	1-162-193-31	CERAMIC	3.3PF	10%	50V
C24	1-162-294-31	CERAMIC	0.001uF	10%	50V
C25	1-162-306-11	CERAMIC	0.01uF	30%	16V
C26	1-104-663-11	ELECT	33uF	20%	16V
C28	1-162-306-11	CERAMIC	0.01uF	30%	16V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C40	1-162-294-31	CERAMIC	0.001uF	10%	50V
C41	1-162-282-31	CERAMIC	100PF	10%	50V
C42	1-162-306-11	CERAMIC	0.01uF	30%	16V
C101	1-162-843-11	CERAMIC	0.022uF	10%	16V
C102	1-126-233-11	ELECT	22uF	20%	50V
C103	1-162-843-11	CERAMIC	0.022uF	10%	16V
C104	1-126-233-11	ELECT	22uF	20%	50V
C105	1-126-961-11	ELECT	2.2uF	20%	50V
C106	1-161-045-00	CERAMIC	0.0033uF	10%	50V
C107	1-161-043-00	CERAMIC	0.0022uF	10%	50V
C108	1-104-664-11	ELECT	47uF	20%	10V
C109	1-126-959-11	ELECT	0.47uF	20%	50V
C110	1-130-487-00	MYLAR	0.022uF	5%	50V
C111	1-126-233-11	ELECT	22uF	20%	50V
C112	1-162-294-31	CERAMIC	0.001uF	10%	50V
C113	1-124-443-00	ELECT	100uF	20%	10V
C116	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C117	1-124-472-11	ELECT	470uF	20%	10V
C118	1-126-233-11	ELECT	22uF	20%	50V
C119	1-136-171-00	FILM	0.33uF	5%	50V
C120	1-126-768-11	ELECT	2200uF	20%	16V
C121	1-126-959-11	ELECT	0.47uF	20%	50V
C122	1-162-841-11	CERAMIC	0.015uF	10%	16V
C123	1-162-282-31	CERAMIC	100PF	10%	50V
C124	1-162-294-31	CERAMIC	0.001uF	10%	50V
C125	1-162-282-31	CERAMIC	100PF	10%	50V
C126	1-162-286-21	CERAMIC	220PF	10%	50V
C127	1-162-282-31	CERAMIC	100PF	10%	50V
C128	1-162-282-31	CERAMIC	100PF	10%	50V
C129	1-162-286-21	CERAMIC	220PF	10%	50V
C130	1-124-472-11	ELECT	470uF	20%	10V
C131	1-162-832-11	CERAMIC	0.0027uF	10%	0
C132	1-136-167-00	FILM	0.15uF	5%	50V
C133	1-136-167-00	FILM	0.15uF	5%	50V
		< FILTER >			
CF1	1-567-390-11	FILTER,CERAMIC 10.7M			
CF2	1-577-072-11	FILTER, CERAMIC			
		< CONNECTOR >			
CN101	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN102	1-566-779-11	PIN, CONNECTOR (PC BOARD) 4P			
* CN104	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P			
		< VARIABLE CAPACITOR >			
CV1	1-151-628-11	CAP, VARIABLE (TUNING)			
CV2	1-151-628-11	CAP, VARIABLE (TUNING)			
CV3	1-151-628-11	CAP, VARIABLE (TUNING)			
CV4	1-151-628-11	CAP, VARIABLE (TUNING)			
		< TRIMMER >			
CT1	1-151-628-11	CAP, VARIABLE (AM TRACKING)			
CT2	1-151-628-11	CAP, VARIABLE (AM FREQUENCY COVERAGE)			
CT3	1-151-628-11	CAP, VARIABLE (FM TRACKING)			
CT4	1-151-628-11	CAP, VARIABLE (FM FREQUENCY COVERAGE)			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D101	8-719-057-90	LED L-974HD (OPR/BATT)	
D102	8-719-109-75	DIODE RD4.3ES-B2	
D103	8-719-055-76	DIODE 1N4148	
D104	8-719-055-76	DIODE 1N4148	
D105	8-719-055-76	DIODE 1N4148	
D108	8-719-109-89	DIODE RD5.6ESB2	
D109	8-719-109-81	DIODE RD4.7ESB2	
D110	8-719-055-76	DIODE 1N4148	
		< FILTER >	
FL1	1-235-171-00	FILTER, BAND PASS	
		< IC >	
IC1	8-759-245-07	IC TA8164P	
IC101	8-759-440-96	IC MM1315AS	
		< COIL >	
L1	1-422-317-31	COIL, AIR-CORE (FM TRACKING)	
L2	1-460-205-31	COIL (WITH CORE) (FM FREQUENCY COVERAGE)	
L3	1-501-805-11	ANTENNA, FERRITE-ROD (AM) (AM TRACKING)	
L6	1-406-576-11	COIL, MW OSC (AM FREQUENCY COVERAGE)	
L10	1-414-140-11	INDUCTOR 0.68uH	
L11	1-414-140-11	INDUCTOR 0.68uH	
L12	1-500-419-11	FERRITE	
		< TRANSISTOR >	
Q1	8-729-194-57	TRANSISTOR 2SC945-P	
		< RESISTOR >	
R1	1-249-391-11	CARBON 6.8 5%	1/4W
R2	1-249-404-00	CARBON 82 5%	1/4W
R3	1-249-428-11	CARBON 8.2K 5%	1/4W
R4	1-247-863-91	CARBON 22K 5%	1/4W
R5	1-249-411-11	CARBON 330 5%	1/4W
R6	1-249-437-11	CARBON 47K 5%	1/4W
R7	1-249-437-11	CARBON 47K 5%	1/4W
R8	1-249-437-11	CARBON 47K 5%	1/4W
R9	1-249-411-11	CARBON 330 5%	1/4W
R20	1-249-439-11	CARBON 68K 5%	1/4W
R101	1-249-421-11	CARBON 2.2K 5%	1/4W
R102	1-249-417-11	CARBON 1K 5%	1/4W
R103	1-249-421-11	CARBON 2.2K 5%	1/4W
R104	1-247-854-11	CARBON 9.1K 5%	1/4W
R105	1-249-413-11	CARBON 470 5%	1/4W
R106	1-247-852-11	CARBON 7.5K 5%	1/4W
R107	1-247-807-31	CARBON 100 5%	1/4W
R108	1-247-815-91	CARBON 220 5%	1/4W
R109	1-249-417-11	CARBON 1K 5%	1/4W
R110	1-247-864-11	CARBON 24K 5%	1/4W
R111	1-247-815-91	CARBON 220 5%	1/4W
R113	1-249-401-11	CARBON 47 5%	1/4W
R116	1-249-407-11	CARBON 150 5%	1/4W
R117	1-249-407-11	CARBON 150 5%	1/4W
R118	1-247-897-11	CARBON 560K 5%	1/4W
R119	1-249-414-11	CARBON 560 5%	1/4W
R120	1-249-413-11	CARBON 470 5%	1/4W
R121	1-247-807-31	CARBON 100 5%	1/4W
R122	1-249-414-11	CARBON 560 5%	1/4W
R123	1-249-389-11	CARBON 4.7 5%	1/4W
R124	1-249-389-11	CARBON 4.7 5%	1/4W
R125	1-247-855-11	CARBON 10K 5%	1/4W
		< VARIABLE RESISTOR >	
RV101	1-223-625-11	RES, VAR, CARBON 20K (VOLUME)	
		< SWITCH >	
S101	1-572-625-11	SWITCH, SLIDE (FUNCTION)	
S102	1-762-565-11	SWITCH, SLIDE (PB/REC)	
		< TRANSFORMER >	
T1	1-406-577-11	TRANSFORMER, IF (FM IF)	
T2	1-406-575-11	TRANSFORMER, IF (AM IF)	
T3	1-406-578-11	COIL, FM DETECTOR (FM IF)	

9-960-488-84

Sony Corporation
Personal Audio Company

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REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	1996.01	New
	1996.03	SUPPLEMENT-1 : Addition of Hong Kong model for CFM-10.
	1997.05	SUPPLEMENT-2 : Change of tape transport mechanism.
	1999.06	SUPPLEMENT-3 : Change of main board (CFM-10: US, CND, C&SA models only).
1.1	2005.05	Addition of Thai model for CFM-10.